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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/250,287	02/16/1999	MAX AARON SOLONDZ	2925-0217P	1880

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EXAMINER
MILORD, MARCEAU

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 04/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
1	1
Examiner	**Art Unit**
Marceau Milord	2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Feb 12, 2002* .

2a) ☒ This action is **FINAL.** 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-12, 14-22, 24, and 25* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-12, 14-22, 24, and 25* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1- 12 , 14- 22, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sporre (US Patent No 5966657) in view of Wallstedt et al (US Patent No 5854981).

Regarding claim 1, Sporre discloses a method of making operational measurements in a wireless communication system (figs. 1-3), comprising sending a measurement request a first base station (B1 of fig. 1) to at least a second base station (B9 of fig. 1), said measurement request (It is considered that the base station B9 orders mobile station M3 of fig. 1 to make periodic signal quality measurements on the downlink BCCH channels ; col. 7, lines 5- 67) requesting said base station to instruct mobile terminals (M1- M10 of fig. 1) in communication with base station to make operation measurements of at least one signal transmitted by said first base station (B1 of fig. 1) ; transmitting (the mobile station M3 or M6 measures systematically the signal quality on each of the frequency channels it has been ordered by the base station B1 to measure via the system 5 information sent on the SACCH ; col. 11, lines 1 - 61) a measurement instruction (col. 5, line 1- col. 6, line 14) from said base station (B9 of fig. 1) to said mobile

terminals (M1- M10 of fig. 1) in communication with said base station in response to said measurement request; and receiving (B1-B10 of fig. 1 ; these measurements are regularly made and reported back to the base station and network which uses it to construct a list of neighboring cells which are candidates for possible hand-off, col. 8, lines 1- 31) results of said operational measurements at said second base station (B9, B5, B3, B 5, B8, col. 8, lines 32- 65) from said mobile terminals (M1- M10 of fig. 1) in communication with said station (col. 10, line 3- col. 11, line 63). However, Sporre does not specifically disclose the features of a second base station transmitting a measurement instruction to the mobile terminals in response to the measurement request. On the other hand, Wallstedt et al, from the same field of endeavor, discloses a method and system utilizes signal measurements performed within the coverage area of a cell to create the neighbor cell list for that cell. The mobile station measures signal strength on the digital communication channel used for the established connection and the bit error rate on the established connection; then, the mobile station transmits of its measurements to the base station. The base station also measures signal strength on the digital communication channel used for the established connection and the bit error rate on the established connection. The base station processes and analyzes the results of its own measurements and the measurements of the mobile station for comparison with handoff criteria. If the received signal strength on the current channel falls below the received signal strength on a measurement channel of a neighboring cell the MSC initiates handoff to that neighboring cell (col. 2, lines 30- 67 ; col. 4, lines 28- 66; col. 7, line 20- col. 8, line 52). Furthermore, Wallstedt also shows in figure 4C, a measurement process where

the results of the signal measurements are used to reconfigure an existing neighbor cell list to include the best candidate cells for handoff. In addition, the measurement results are checked to determine if cells should be added to or deleted from the existing neighbor cell list (col. 10, line 18 - col. 11, line 67). Wallstedt also shows a flow diagram where at step 619, a measurement process begins as the MSC sends the base station and mobile station measurement lists to the base station ; the mobile station measurement list will then be further transmitted to the mobile station from the base station. At step 622 the MSC receives an input where it is either a set of measurements results from a mobile station or a base station or, a neighbor cell list signal. Then, at step 634 the measurements results are stored ; the process moves to step 626 where the stored measurement results are averaged to create an average interference level for each measurement channel (figs. 4A- C, col. 11, line 12- col. 12, line 46 ; col. 17, line 21- col. 18, line 48). The other base stations themselves can make or instruct the mobile terminals in their coverage areas to make the operational measurements in response to a request from the base station of interest as claimed (figs. 7-9, col. 14, line 4- col. 15, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this signal strength measurement techniques of Wallstedt to the communication system of Sporre in order to make operational measurements along with signal quality measurements of channels from the serving base station as well as signal quality measurements for channels from other base stations.

Regarding claims 2, 17, Sporre as modified discloses a method (fig. 1) of sending (M1-M10 of fig. 1) said received results (col. 10, lines 9- 51) to a main controller (the mobile station

M3 or M6 measures systematically the signal quality on each of the frequency channels it has been ordered by the base station B1 to measure via the system 5 information sent on the SACCH ; col. 11, lines 1 - 61).

Regarding claim 3, Sporre as modified discloses a method (fig. 1) of processing said received results (col. 10, lines 9- 67) ; and sending (M1- M10 of fig. 1; 42 of fig. 6) said processed received results to a main controller (col. 7, line 5- col. 8, line 65).

Regarding claim 4, Sporre as modified discloses a method for averaging said received results (col. 11, lines 5- 63).

Regarding claim 5, Sporre as modified discloses a method wherein said step of receiving results (figs. 5- 7) of said operational measurements and location information indicating a location of said mobile terminal taking each operational measurement (col. 10, line 3- col.11, line 58) ; and said step of creating a map of said received results based on said location information (col. 12, lines 20- col. 13, line 59).

Regarding claim 6, Sporre as modified discloses a method wherein said step of receiving results (figs. 5- 7) of said operational measurements and location information (col. 12, lines 20- col. 13, line 59) indicating a location of said mobile terminal taking each operational measurement (col. 10, line 3- col.11, line 58).

Regarding claims 7, 11, 18, 22 , Sporre as modified discloses a method wherein said signal transmitted from said first base station (B1-B10 of fig. 1; col. 8, lines 32- 65) is transmitted at a constant power level (col. 11, lines 5- 63).

Regarding claims 8 and 19 , Sporre as modified discloses a method wherein said signal transmitted from said first base station is a forward control channel signal (col. 5, line 2- col. 6, line 20; col. 7, line 34- col. 8, line 55).

Regarding claims 9 and 20, Sporre as modified discloses a method wherein said wireless communication system is a code division multiple access system and said signal transmitted from said first base station is a pilot signal (col. 5, line 4 - col. 6, line 20; col. 7, line 5- col. 8, line 65).

Regarding claims 10 and 21, Sporre as modified discloses a method wherein said signal is one of a reserved or dummy channel (col. 8, line 32- col. 10, line 51).

Regarding claims 12, Sporre as modified discloses a method for making said operation measurements at said mobile terminals in communication with said second base station during off time-slots of said mobile terminals (col. 7, lines 5- 67; col. 8, lines 8- 65) in communication with said second base station in response to said measurement instruction (col. 10, line 3- col. 11, line 63).

Regarding claims 14 and 24, Sporre as modified discloses a method wherein said step of sending a measurement request (col. 11, lines 1 - 61) from said first base station to said second base station via a main controller (col. 7, line 5- col. 8, line 65), said measurement request instructing said main controller to send said measurement request to said second base station (col. 11, lines 1 - 61).

Regarding claims 15 and 25, Sporre as modified discloses a method (figs. 5-7)wherein said operational measurements includes at least one of signal strength (col. 11, lines 11- 58),

signal-to-noise ratio, frame error rate and bit error rate of said signal transmitted from said first base station as received at said mobile terminals (col. 13, line 1- col. 14, line 36) in communication with said base station (col. 16, line 27- col. 17, line 21).

Regarding claim 16, Sporre discloses a method of making operational measurements in a wireless communication system (figs. 1-3), comprising : sending a measurement request from one of a first base station (B1 of fig. 1) to at least a second base station (B9 of fig. 1), said measurement request requesting (It is considered that the base station B9 orders mobile station M3 of fig. 1 to make periodic signal quality measurements on the downlink BCCH channels; col. 7, lines 5- 67) said base station to make operation measurements of at least one signal transmitted by said first base station (the mobile station M3 or M6 measures systematically the signal quality on each of the frequency channels it has been ordered by the base station B1 to measure via the system 5 information sent on the SACCH ; col. 11, lines 1 - 61) ; and making (M1- M10 of fig. 1; these measurements are regularly made and reported back to the base station and network which uses it to construct a list of neighboring cells which are candidates for possible hand-off, col. 8, lines 1- 31 ; col. 10, line 3- col. 11, line 63). However, Sporre does not specifically disclose a second base station transmitting a measurement instruction to the mobile terminals in response to the measurement request. On the other hand, Wallstedt et al, from the same field of endeavor, discloses a method and system utilizes signal measurements performed within the coverage area of a cell to create the neighbor cell list for that cell. The mobile station measures signal strength on the digital communication channel used for the established

connection and the bit error rate on the established connection; then, the mobile station transmits of its measurements to the base station. The base station also measures signal strength on the digital communication channel used for the established connection and the bit error rate on the established connection. The base station processes and analyzes the results of its own measurements and the measurements of the mobile station for comparison with handoff criteria. If the received signal strength on the current channel falls below the received signal strength on a measurement channel of a neighboring cell the MSC initiates handoff to that neighboring cell (col. 2, lines 30- 67 ; col. 4, lines 28- 66; col. 7, line 20- col. 8, line 52). Furthermore, Wallstedt also shows in figure 4C, a measurement process where the results of the signal measurements are used to reconfigure an existing neighbor cell list to include the best candidate cells for handoff. In addition, the measurement results are checked to determine if cells should be added to or deleted from the existing neighbor cell list (col. 10, line 18 - col. 11, line 67). Wallstedt also shows a flow diagram where at step 619, a measurement process begins as the MSC sends the base station and mobile station measurement lists to the base station ; the mobile station measurement list will then be further transmitted to the mobile station from the base station. At step 622 the MSC receives an input where it is either a set of measurements results from a mobile station or a base station or, a neighbor cell list signal. Then, at step 634 the measurements results are stored ; the process moves to step 626 where the stored measurement results are averaged to create an average interference level for each measurement channel (figs. 4A- C, col. 11, line 12- col. 12, line 46 ; col. 17, line 21- col. 18, line 48). The other base stations themselves can make

or instruct the mobile terminals in their coverage areas to make the operational measurements in response to a request from the base station of interest as claimed (figs. 7-9, col. 14, line 4- col. 15, line 67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply this signal strength measurement techniques of Wallstedt to the communication system of Sporre in order to make operational measurements along with signal quality measurements of channels from the serving base station as well as signal quality measurements for channels from other base stations.

Response to Arguments

3. Applicant's arguments filed on 2-12-2002 have been fully considered but they are not persuasive.

Applicant's representative argues that Sporre and Wallstedt fails to disclose the steps of sending a measurement request from a first base station to at least a second base station, said measurement request requesting said second base station to instruct mobile terminals in communication with said second base station to make operation measurements of at least one signal transmitted by said first base station.

However, Wallstedt discloses a neighbor cell list that is generated for the selected cell by determining the highest quality values, and placing the handoff measurement channels of the neineighboringlls associated with the highest quality values in the neighbor cell list. In addition, Wallstedt shows in figure 4C, a measurement process that begins as the MSC sends the base station and mobile station measurement lists to the base station. The mobile station measurement

list will be transmitted to the mobile station from the base station. The base station instructs the mobile station to drop the weakest base station among the base stations that are presently in the active state and to add the newly detected base station (col. 11, line 12- col. 12, line 57; col. 17, line 21- col. 18, line 48). It is considered that this technique is used in a soft handoff that employs a "make and break " handoff algorithm. Therefore, Wallstedt's reference clearly reads on the claims.

The Examiner still believes that these references were used to disclose such feature as it was applied in the above rejection.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban, can be reached on (703) 305- 4385. The FAX phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 306-0377.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marceau Milord whose telephone number is (703) 306-3023. The examiner can normally be reached on Monday through Thursday from 7:30 A.M. to 6:00 P.M.

Marceau Milord

MARCEAU MILORD

April 21, 2002

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